

**Amendments to the Specification:**

Please replace the paragraph beginning on page 2 at line 17, with the following rewritten paragraph:

a' --Accordingly, preferably most and more preferably all of the performance mass of the club head should be arranged so as to increase the club head's moment of inertia about the vertical axis and the heel/toe axis but not the front/back axis. Moreover, it is also important that the performance mass be positioned such that the center of gravity of the club head lie below the physical center of the golf club. Such an arrangement helps the golfer to get the golf ball airborne. Thus, the performance mass also should be concentrated below the physical center of the club head.--

Please replace the paragraph beginning on page 4 at line 8, with the following rewritten paragraph:

a2 --Figure 1 is a perspective view of a club head 10 located about a coordinate system 12. The coordinate system 12 is centered about the center of mass 11 of the club head. As is typical in the art, the club head 10 comprises a strike plate 14, which defines a substantially planar front surface or strike face 16 for impacting a golf ball. A hosel 18 extends upwardly from the strike plate 14. The hosel 18 is used to attached the club head 10 to a golf club shaft (not shown) as is well known in the art. The club head 10 also includes a load bearing outer shell 20 that is either integrally made with or attached to the strike plate 14. A heel region 22 of the club head is located close to the hosel 18 while the toe region 24 of the club head is located opposite the heel region 22.--

Please **replace** the paragraph beginning on page 6 at line 25, with the following rewritten paragraph:

a<sup>3</sup>  
--The club head preferably should also be arranged such that the center of gravity is located not too far back from a shaft or hosel axis 37 of the club head 10 (i.e., a line that extends through the center of the shaft and the hosel). The horizontal distance in a direction back from the face 16 between the center of gravity and shaft or hosel axis 37 will be referred to as  $\Delta_1$ . Preferably,  $\Delta_1$  is in the range of 12 - 25 millimeters. More preferably,  $\Delta_1$  is in the range of 16 - 20 millimeters. Most preferably,  $\Delta_1$  is in the range of 17 - 18 millimeters.  $\Delta_1$  can be manipulated by varying the mass in front of the center of gravity (i.e., closer to the face) with respect to the mass behind the center of gravity. That is, by increasing the mass behind the center of gravity with respect to the mass in front of the center of gravity,  $\Delta_1$  can be increased. In a similar manner, by increasing the mass in front of the center of gravity with respect to the mass behind the center of gravity,  $\Delta_1$  can be decreased. The above ranges for  $\Delta_1$  are preferred for several reasons. If  $\Delta_1$  is too far forward, the trajectory of the golf ball tends to be too low and to the right, especially in large club heads (e.g., an interior volume greater than 300 centimeters cubed). Conversely, if  $\Delta_1$  is too far back the trajectory of the golf ball tends to be too high and the golf ball tends to have too much spin.--

Please **replace** the paragraph beginning on page 8 at line 22, with the following rewritten paragraph:

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--Figures 7 and 8 show cross-sectional side and bottom views, respectively, of the club head 50. In the preferred embodiment, the golf club head 50 includes two or more

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weights plugs 74a, 74b that are situated within corresponding recesses 76a, 76b formed in the outer shell 64. In the illustrated embodiment, the weights 74 are removably coupled to the sole 70 of the club head 50 by screws 78. However, it should be appreciated that the weights 74a, 74b can be coupled to the club head 50 by using an adhesive, brazing, etc., or the weights 74 may be integrally formed with the sole plate. The weights 74a, 74b preferably are made of a material, such as, for example, tungsten, that is denser than the material(s) that form the outer shell 64 and the strike plate 58.--

Please replace the paragraph beginning on page 9 at line 10, with the following rewritten paragraph:

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--The club head 50 described above 50 preferably has a moment of inertia about the heel/toe axis that is significantly greater than conventional club heads (i.e., interior volumes between 200-350 centimeters cubed and a mass between 180-250 grams). As mentioned above, the inertial properties of a club head are dependent upon the head volume. Accordingly, the club head 50 preferably has a moment of inertia through the center of gravity about the heel/toe axis as set forth below in equation 1.

$$I_{xxyy} \geq .46 * HV + 77 \quad (1)$$

where: HV = cubic centimeters (cc)

$I_{xxyy}$  = kilograms millimeters squared (kg-mm<sup>2</sup>)

More preferably, the club head 50 has a moment of inertia through the center of gravity about the heel/toe axis as set forth in equation 2.

$$I_{xxyy} \geq .46 * HV + 107 \quad (2)$$

where: HV = cubic centimeters (cc)

$I_{xxyy}$  = kilograms millimeters squared (kg-mm<sup>2</sup>)

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The higher moments of inertia of equation 2 can be achieved by reducing or holding constant the mass of the shell 64 and/or the strike plate 58 while increasing or holding constant the mass of the weights 74a, 74b while also giving due consideration to the structural integrity of the club head 50.--

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Please replace the four paragraphs beginning on page 10 at line 4, with the following four rewritten paragraphs:

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--Preferably, the club head 50 also has a moment of inertia about the vertical axis that is at least 250 kilograms per millimeters squared. More preferably, the club head has a moment of inertia about the vertical axis of at least 300 kilograms per millimeters squared. As with the moment of inertia about the heel/toe axis, the moment of inertia about the vertical axis can be increased by reducing or holding constant the mass of the shell 64 and/or strike plate 58 while increasing or holding constant the mass of the weights 74 while also giving due consideration to the structural integrity of the club head 50.

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As mentioned above,  $\Delta t_1$  of the club head 50 preferably is less than 30 millimeters. Preferably,  $\Delta t_1$  is in the range of 12 - 25 millimeters. More preferably,  $\Delta t_1$  is in the range of 16 - 20 millimeters. Most preferably,  $\Delta t_1$  is in the range of 17 - 18 millimeters.

The club head 50 described above has generally traditional dimensions as a driver-type wood (i.e., the head volume is between 300 and 200 centimeters cubed). However, some golfers prefer a "large" club head. That is, some golfers prefer a club

head that defines an interior volume greater than 300 centimeters cubed and a mass between about 180-210 grams-. If such a club head is desired, it can be constructed as described above by enlarging the size of the strike plate 58 and the outer shell 64.

As with the club head 50 described above, the club head 50 preferably has a moment of inertia about the heel/toe axis as set forth above in equation 1. More preferably, the club head 50 has a moment of inertia about the heel/toe axis as set forth in equation 2. The center of gravity of the club head also preferably lies below the horizontal centerline 82 of the club head 50. More preferably, the center of gravity is greater than 1 millimeter below the horizontal centerline 82 of the club head 50.

Preferably, the club head 50 also has a moment of inertia about the vertical axis that is at least 250 kilogram millimeters squared ( $\text{kg}\cdot\text{mm}^2$ ). Most preferably, the club head as a moment of inertia about the vertical axis of at least 300 kilograms millimeters squared ( $\text{kg}\cdot\text{mm}^2$ ). Preferably,  $\Delta t_1$  is in the range of 12 - 25 millimeters. More preferably,  $\Delta t_1$  is in the range of 16 - 20 millimeters. Most preferably,  $\Delta t_1$  is in the range of 17 - 18 millimeters.--

Please replace the paragraph beginning on page 11 at line 1, with the following rewritten paragraph:

--In a modified arrangement, the head may comprise a smaller driver or a fairway wood club head. This smaller club head defines an interior volume less than 200 centimeters cubed and a mass between about 200-250 grams. If such a club head is desired, it also can be constructed as described above by adjusting the shape and size of the strike plate 58 and the outer shell 64. As with the club head 50 described above, the club head 50

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preferably has a moment of inertia about the heel/toe axis as set forth above in equation 1. More preferably, the club head 50 has a moment of inertia about the heel/toe axis as set forth in equation 2. The center of gravity of the club head also preferably lies at least 1 millimeter below the horizontal centerline 82 of the club head 50. More preferably, the center of gravity is greater than 2 millimeters below the horizontal centerline 82 of the club head 50. Preferably, the club head 50 also has a moment of inertia about the vertical axis that is at least 200 kilograms millimeters squared ( $\text{kg}\cdot\text{mm}^2$ ). More preferably, the club head has a moment of inertia about the vertical axis of at least 250 kilogram millimeters squared ( $\text{kg}\cdot\text{mm}^2$ ).  $\Delta\pm 1$  preferably is in the range of 12 - 25 millimeters. More preferably,  $\Delta\pm 1$  is in the range of 16 - 20 millimeters. Most preferably,  $\Delta 1$  is in the range of 17 - 18 millimeters.--

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